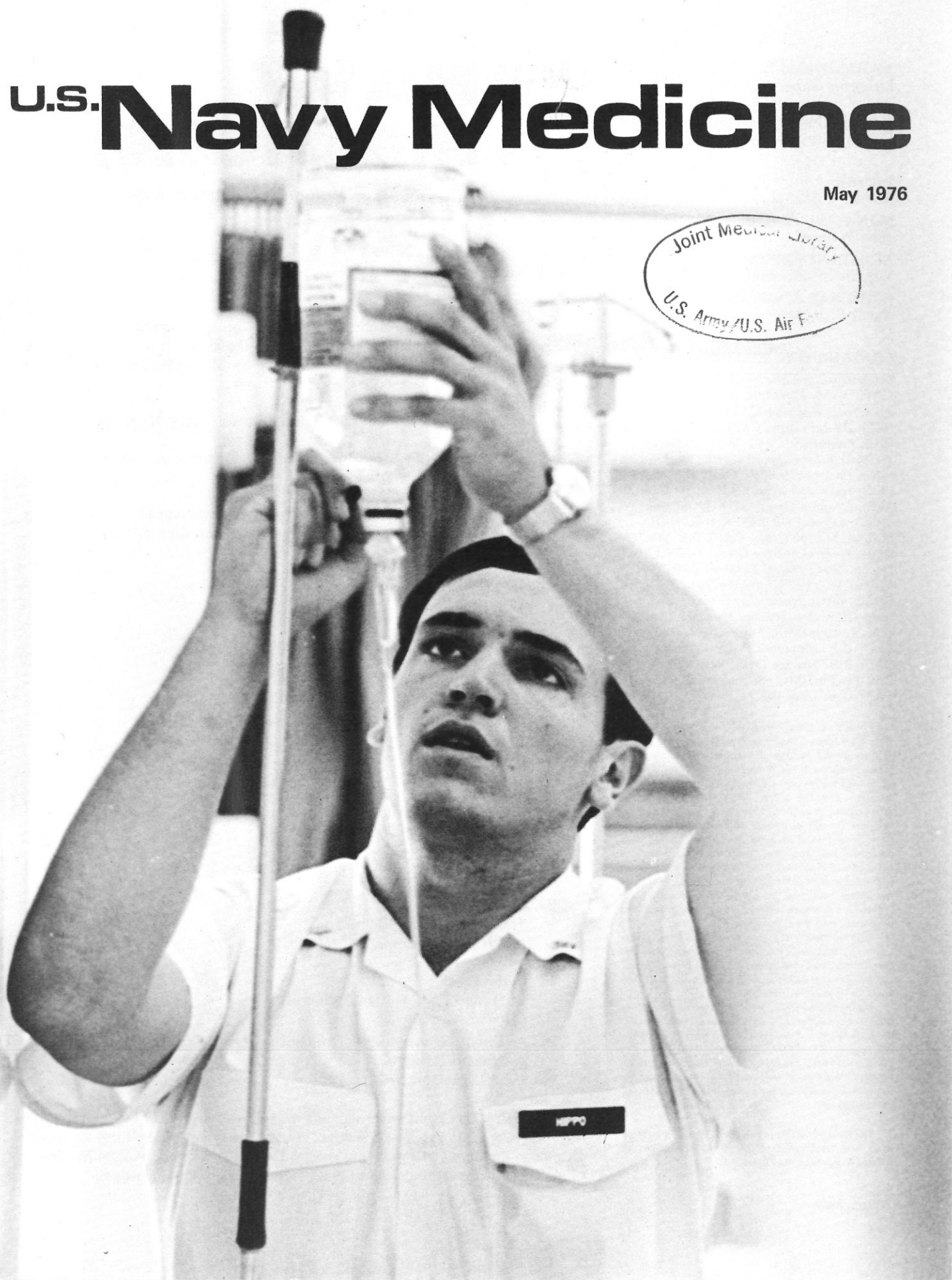
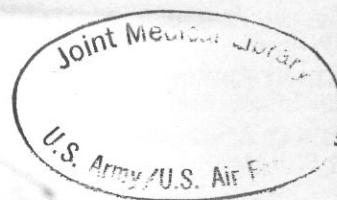


U.S. Navy Medicine

May 1976



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Surgeon General of the Navy

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Deputy Surgeon General

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U.S. NAVY MEDICINE

Volume 67, Number 5, May 1976

- 1 From the Chief
- 2 Department Rounds
Flight surgeon researchers needed . . . Influenza update . . . Home-grown pharmacists . . . Watching over the fleet's feet . . . Good news for MSC candidates . . . New medical center for Pensacola
- 6 Interview
RADM Maxine Conder, NC, USN, Director, Navy Nurse Corps
- 9 Scholars' Scuttlebutt How to get the residency you want
- 13 Notes and Announcements
Second year comprehensive dentistry residents named . . . Dental Reserve seminar held . . . Corpsmen selected for advanced training . . . Flight surgeon billets available
- 15 NAVMED Newsmakers
- 16 Features
Outpatient Surgery at NRMBC Bremerton
CDR C.W. Bollinger, MC, USNR
LCDR W.A. Fregeau, MSC, USN
- 18 On Duty Learning the ropes at NRMBC San Diego
- 19 BUMED SITREP
- 20 Education and Training
The care and comfort of surgical patients . . . Dental continuing education heats up
- 22 Letters
- 23 Clinical Notes
The Neurovascular Checklist
LCDR N.R. Mazzone, NC, USN
- 24 Professional
Does Man Have Tumor Antibodies?
CAPT C.W. Ochs, MC, USN
- 27 A Tumor Registry Study of Cancer of the Oral Cavity and Associated Structures
LT J.J. Zambon, DC, USNR

COVER: Sixty-eight years ago, when the Navy Nurse Corps was established, there were 20 nurses—all female. Today there are 2,558 Nurse Corps officers, including 419 male nurses. Nurse Corps Director RADM Maxine Conder discusses the state of Navy nursing beginning on page 6.

Toward Tri-Service Health Management

The following is excerpted from the Surgeon General's keynote address at the Naval Medical Research and Development Command's Technical Workshop on Combat Casualty Care, held 26-28 April at Airlie House in Warrenton, Virginia:

The OMB Study was launched three years ago at the time the Administration presented the President's Comprehensive Health Insurance Program (CHIP) for legislative consideration. There was at that time high expectancy for some definitive Congressional action. The authors of CHIP had a clear appreciation of national health insurance impact on current federal health care systems, and a suspicion that wholesale transfer of non-active-duty beneficiaries out of the military medical system would be cost effective.

During the course of the study three developments heavily influenced its outcome. First, Congress became much more constrained and circumspect in its approach to health legislation. Second, the study revealed that health care services in the military system were, by comparison, more economical. Finally, the study team came to realize there were, over and above contingency medical manpower requirements, certain additional elements essential to maintenance of a peacetime quality health care delivery system. Notable among those elements are a patient mix in support of medical education, paramedical training, and professional satisfaction.

In my opinion, the OMB Study proved to be, in balance, a very constructive effort with recommendations which merit consideration for phased implementation. I refer especially to the proposal for a central entity of as yet unprescribed structure. One option



could be a Joint Chiefs of Medical Services answerable to the Joint Chiefs of Staff. The office could be vested with responsibility for carrying out tri-service coordinated planning, programming, allocation of all resources, monitoring and evaluating the CONUS military health care system. I, for one, am satisfied this does not portend a purple suit, but would mandate integrated tri-service health management. It could be a mechanism for fencing required resources for quality care to all beneficiaries, maximizing their most efficient utilization. Coordinated management of CHAMPUS and direct care could also be assured. Operational medical support would remain exclusively under single service purview.

The three Surgeons General have been invited to sit down with the staff of the JCS, under the sponsorship of J4 (Logistics), to explore a mechanism for ongoing direct input to and interface in

the JCS arena. High on that agenda will be these four issues:

- The need for early acquisition of facilities and equipment for combat operational medical support.
- Refinement of the medical contingency study justifying and restoring realistic medical personnel end strengths to meet the scenario demands of major conflict.
- Restoration of funds for professional growth programs and protection of patient mix throughout the systems as essential for medical education and training, continuous education and professional satisfaction. (If, as some of our adversaries are proposing, military medicine is ever forced into a situation where only, or predominantly, healthy active-duty young adults are cared for, deterioration of the system will be inexorable. It will never attract the high quality volunteer health professional.)
- Restoration of the Laird Medical Military Construction Program and acceleration of OPN support.

Surgeon General of the Navy

Photo by PH2 Terry Mitchell

Department Rounds

Aviation

Billets Open For Flight Surgeon Researchers

Naval flight surgeons interested in improving the safety, health, and comfort of aircrewmembers may find what they're looking for in aviation medical research.

The Navy's Aviation Medicine Research Program needs flight surgeons to fill four billets—two at the Naval Air Development Center, Warminster, Pennsylvania, and one each at Naval Aerospace Medical Research Laboratory, New Orleans, Louisiana, and Naval Air Test Center, Patuxent River, Maryland. Projects at these facilities include the study of valid medical standards for aviation personnel, diagnosis and treatment of aviation-related health problems, and design criteria for aircrew life support systems and personal equipment used in fleet aviation work.

Research and development projects are also conducted at the Naval Aerospace Medical Research Laboratory, Pensacola, Florida. The three flight surgeon billets there are currently filled.

At Warminster, researchers work mostly with the dynamic flight simulator, one of the largest centrifuges in the United States. This laboratory also has a large ejection seat tower; hypobaric, hyperbaric and climatic chambers; a horizontal accelerator and vertical decelerator; and an underwater research facility. Medical researchers work with engineers to test hardware, safety equipment, and clothing being developed for the fleet. There are four flight surgeon billets: director of the Crew Systems Department, a research flight surgeon, head of the Aerospace Medical Division, and an

aviation medicine specialist. The last two billets are unoccupied.

At the New Orleans laboratory, human response to impact acceleration, vibration, and ship motion is being examined. The lab plans a data bank on human dynamic response to impact—information needed to design restraint devices and construct a valid anthropomorphic dummy to test injury prevention systems. Such long-term studies of man's ability to tolerate vibration and ship motion are particularly vital since the advent of high-speed hydrofoils and surface effect ships. This laboratory is reportedly the most modern and unique facility in the free world for the study of human response to impact and vibration.

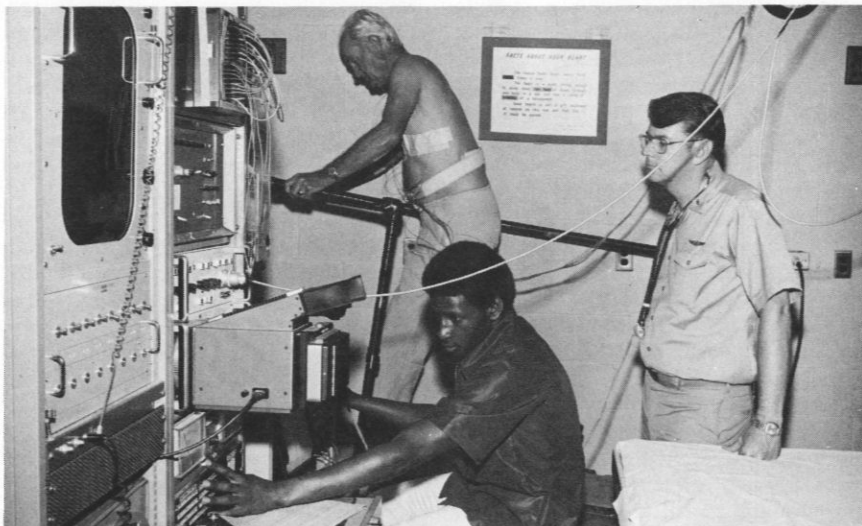
The research flight surgeon at the Patuxent River Naval Air Test Center works with experimental squadron VX-1 to test and evaluate

aircrew equipment. This billet is now empty.

At Pensacola, studies are under way on clinical aviation problems—disorientation, prevention of motion sickness, long-term pulmonary effects of using 100% oxygen, and the aging process in aviators. Facilities include a pulmonary function and cardiovascular laboratory, a rotating room and other disorientating devices, audiology and visual labs, and hypobaric chambers. A major study of the effects of electromagnetic radiation is also being done. NAMRL Pensacola also collaborates with the Naval Health Research Center at San Diego in a follow-up of physical and emotional problems of repatriated prisoners of war.

Program manager for naval aviation medical research is CAPT R.K. Ohlund (MC), head of the Aircrew Systems Biomedical Support Division at the Naval Medical Research and Development Command. CAPT Ohlund monitors, coordinates and advises the above laboratories.

Flight surgeons interested in applying for research positions should contact CAPT W.W. Simmons, MC, USN, Head, Aerospace Medicine Division, Bureau of Medicine and Surgery (Code 511), Department of the Navy, Washington, D.C. 20372 or phone (Area code 202) 254-4361 or Autovon 294-4361.



Cardiac stress tests are part of aviation medical research

Influenza Update

The Medical Departments of the Armed Forces are drawing up preliminary plans to counter a major influenza epidemic that health authorities suspect may occur during the 1976-77 epidemiologic year. The prediction is based upon the appearance of a new swine strain of influenza similar to the virus which caused the pandemic of 1918. As of 31 March, person-to-person transmission of the new strain—*influenza A/New Jersey/8/76 (H_{sw}1N1)*—had been documented only at Fort Dix, New Jersey, where Army epidemiologists estimate that up to 500 cases of *A_{swine}* disease may have occurred during January and February. No other large outbreaks have occurred. However, isolated seroconversions to the new strain have been identified in Pennsylvania, Virginia, Minnesota and Tennessee.

In the past, influenza epidemics have occurred within a year or two of major antigenic shifts in the viral agent. The association of *H_{sw}1N1* strains with large numbers of clinical cases may therefore presage the replacement of the *H3N2* strains prevalent since 1968.

Influenza experts believe that an epidemic can be avoided by rapidly creating a large immune population. This can best be accomplished by giving a large segment of the susceptible population vaccine that contains antigens of the prevalent strain or strains. It is anticipated, therefore, that the influenza vaccine will be mandatory for all active-duty Navy and Marine Corps personnel when it becomes available next fall. Immunization of dependents, retirees and civilian employees will be strongly encouraged.

A review of respiratory disease outbreaks during the 1976 influenza season suggests that there was

widespread, relatively mild disease during the months of January and February. Local mini-epidemics occurred in the Norfolk, Great Lakes, Philadelphia and San Diego regions. Limited laboratory evidence suggests that most of these outbreaks were due to *influenza A/Victoria/3/75(H3N2)*. Shipboard respiratory disease was also relatively mild, although in a few cases up to half of the crew was incapacitated.

The efficacy of the influenza vaccine administered to the Navy and Marine Corps alert forces during the fall of 1975 could not be specifically evaluated since no definitive Navy studies were directed toward this end. Prior studies, however, have suggested that antigen-specific influenza vaccines protect 70% of recipients who are exposed to that virus. Further, a small study by the Air Force suggested that unimmunized personnel were four times more likely to become infected with influenza than those who received vaccine.

Information on influenza prevention and other immunization efforts is available from navy environmental and preventive medicine units or from BUMED Code 55.

Pharmacy

Home-Grown Pharmacists

The Medical Department no longer has to search for its pharmacists only in parts unknown. They can be found closer to home—in the Navy's first accredited pharmacy residency program, at the National Naval Medical Center.

To be accredited, the NNMC Pharmacy Service had to meet stiff standards set by the American Society of Hospital Pharmacists (ASHP). An accredited pharmacy residency program must offer the resident 2,000 hours of training in specialty areas such as inpatient



First pharmacy grad, LT Muklevicz (with RADM D.E. Brown [MC])

drug distribution and control, outpatient drug services, drug information services, department administration, and preparation of sterile dose forms. The resident must also have access to lectures, conferences, and seminars.

ASHP looks for a pharmacy staff qualified to run residency training, and an adequate pharmacist:patient ratio. Also required is a modern drug distribution system—the unit dose concept.

"The ASHP insists on a full spectrum of pharmaceutical services, both inpatient and outpatient," says CAPT Theodore W. Tober (MSC), residency program preceptor. "They want to see if all pharmaceutical functions are covered adequately for this size hospital."

The 52-week training program is currently authorized only one resident a year. LT Robert E. Muklevicz (MSC) was the first to go through. After him came LT Franz Peterson (MSC), who will complete training this August. Residents receive all their training at NNMC, and do not rotate to other Navy medical facilities.

Anyone interested in joining the Navy's 101 registered pharmacists should contact CAPT Tober at the Pharmacy Service, NNMC Bethesda, Maryland 20014. Or phone (Area code 202) 295-0127.

Watching Over The Fleet's Feet

Did you know you walk about 1,000 miles a year? That by the time you're 70 you've walked around the earth nearly two and a half times? That almost 70% of Americans have foot problems?

It's enough to keep podiatrists on the run. But none are busier than the Navy's 14 foot doctors, who cope with special problems endemic to the Navy and Marine Corps, as well as with the usual walk-of-the-mill podiatric ailments.

During this year's National Foot Health Week (9-15 May) *U.S. Navy Medicine* asked the Navy's chief podiatrist, CAPT Edwin S. Hockstein (MSC), how Navy feet are faring.

"Very well," he told us. "We try to take care of podiatric problems before the men get into the fleet." One example: podiatrists urge Navymen to wear adequate shoes for their jobs. Flight crewmembers wear steel-toed boots to avoid injury if their feet hit the cockpit lip during ejection, or if a heavy box falls off a helicopter winch. Metal workers wear shoes without laces, easy to jump out of if hot metal spills.

Navy podiatrists are stationed wherever the fleet parks its ships, says CAPT Hockstein. "And independent duty hospital corpsmen get enough podiatric training to cover situations where no podiatrist is available."

What kind of foot failures are common in the Navy? The list includes painful feet from marching, plantar warts, malpositioned foot-bones, minor congenital malformations (such as flat feet), excessively high or low arches, muscle imbalances, and the ubiquitous corns and calluses.

Navymen also have some unique foot stresses, particularly during training. "There's an enormous amount of trauma to the foot during Marine boot camp and parachute

training," says CAPT Hockstein. "This causes stress fractures of the metatarsus and heels. All recruits have this problem, but Marines

much more than Navymen, because Marines are trained to be infantrymen first."

But sailors aren't spared. "Steel decks and ladders are hell on feet," CAPT Hockstein points out. "Going up and down vertical ladders is tough on some people." Submariners who slide down a ladder when the craft dives rapidly may suffer when their feet hit the deck. Boiler room workers cope with excessive heat and moisture, as do mess cooks.

At Naval Hospital Beaufort, South Carolina, the Navy sponsors the only military podiatric residency program. The first resident, LTJG Dennis R. Perry (MSC), graduated last year and is now with Naval Regional Medical Center San Diego. LT John J. Malone (MSC) graduates in June 1976. And next year's resident has already been selected: his name, appropriately enough, is LT George Korn (MC).



CAPT E.S. Hockstein (MSC)
Guarding the Navy's feet

How to Have Healthy Feet

The American Podiatric Association offers these tips to help keep your feet healthy this summer:

- Don't walk barefoot on hot sidewalks or rough ground. This exposes the feet to injury and infection, particularly to plantar warts.
- When you're mowing the lawn, wear heavy shoes to protect your toes from accidental injury or amputation by a power mower.
- Prevent athlete's foot and other fungal infection by keeping your feet clean and dry. Change shoes and socks frequently, and use foot powder.
- Avoid platform shoes. If you want to be in style regardless of the risks, keep an extra pair of driving shoes in your car. It's dangerous to drive in platforms: the heel can get caught in the accelerator pedal and cause you to lose control of the car.



Keep feet clean and dry

MSC candidates have

One Less Exam

Although still rough sailing, hospital corpsmen and dental technicians will find their voyage to a Medical Service Corps commission a little less turbulent now: they will take only one exam instead of two.

Previously, qualified HM and DT petty officers, E-6's through E-9's, had to take an Officer Selection Battery exam covering basic educational skills as well as military information before they could take the professional examination for in-service MSC officer candidates. That Officer Selection Battery exam has been tossed overboard, allowing applicants recommended by their commanding officer to head straight for the professional exam.

According to a MSC staff member at BUMED, the Officer Selection Battery exam was expensive to administer and had never been validated as to its ability to predict a candidate's potential for performance as a health care administrator. "We hope that the new system will tell us more about an applicant's managerial skills and administrative potential," says LCDR J.T. Dalton (MSC), head of the Procurement and Programs Branch, MSC Division, at BUMED.

While the old professional exam consisted mostly of essay questions, the new exam is expected to offer both objective and subjective questions, and to be more related to areas associated with duties regularly performed by junior MSC officers.

Exam and application dates have also changed. Candidates now have until 15 August to ask their CO for permission to take the professional examination. Motivation, leadership potential, outstanding operational performance, and self-improvement through off-duty civilian



NARMC Pensacola, Florida

or Navy correspondence courses are some of the signs the CO looks for in judging an applicant's potential.

By 1 September, the CO orders a professional exam for eligible men and women, to be taken the first Monday and Tuesday in November. Those who achieve a high enough score in this exam will be advised by the Professional Examination Board in December. They must submit a formal application for commissioning to the Bureau of Naval Personnel no later than 1 February. It is planned that a list of successful candidates will be sent by the Board, through appropriate Navy channels, to the Senate for confirmation by 1 April.

The implementing instruction (BUPERS Instruction 1120.15L) includes several other changes in MSC in-service procurement. Commanding officers' options are now more clearly defined to help them decide which applicants are qualified to take the professional exam. Also, candidates must now undergo a screening physical examination before asking for permission to take the professional exam.

The MSC In-Service Procurement Program is highly competitive. Last year, of some 375 senior petty officers who took the Officer Selection Battery exam, only 125 made it to the next step—the professional exam. Twenty-five of these candidates were eventually commissioned.

Facilities

Bicentennial Bonus

There's something special about the Navy's new medical center dedicated at Pensacola, Florida, on 26 March, and it's not just those eight carefully designed stories, or the honeycomb look of those rows of windows, or the abundance of modern equipment inside. The new Naval Aerospace and Regional Medical Center, Pensacola is the Medical Department's Bicentennial baby: the only such Navy facility scheduled to be dedicated during 1976.

The 310-bed, 283,225-square-foot facility represents an investment of more than 21 million dollars. On every floor can be found examples of the latest medical technology: closed circuit color TV and security systems, fetal heart monitoring systems, centrally piped medical gas and vacuum systems, multilevel biochemical analysis equipment, and radiologic and nuclear diagnostic equipment. One-, two- and four-bed wards with private bath, centralized nursing stations, and communications services offer inpatients maximum comfort and privacy. Outpatients, too, benefit from spacious, centralized services.

Interview

RADM Maxine Conder talks about

Navy Nurses at 68

When Maxine Conder became the Navy's second woman admiral—and the second admiral to head the Nurse Corps—last year, she characteristically turned the spotlight away from herself onto others. Her achievement was "more than just a personal honor for me and the Nurse Corps," she said at her frocking ceremony. It was "another positive step for all the women in the Navy, and living proof of the continuing opportunities for all members of the military community."

This month, RADM Conder marks her 25th year as a Navy nurse, and with Navy nurses worldwide celebrates the 68th anniversary of the Nurse Corps. U.S. Navy Medicine visited the Navy's top nurse in her BUMED office to talk about the past, present, and future of Navy nursing:

USNM: RADM Conder, you celebrate 25 years as a Navy nurse this month. What changes have you seen in Navy nursing in those 25 years?

RADM CONDER: There have been great changes in rank structure. When I first came into the Navy, lieutenant commanders in the Nurse Corps were very senior people. I must admit we were very frightened of them! Education opportunities have certainly improved, too. At the time I came in, very few nurses were sent for graduate education. And of course, medical care as a whole has changed. We didn't have critical care units when I came in. We don't see as many tuberculosis cases now as we did then.

I've also seen a change in nurses' roles. Chief nurses are now acknow-

ledged as policymakers within the command. As I go out into the field, I see commanding officers recognizing the support of chief nurses and their importance in the executive branch of the hospital.

Speaking of the field, you've recently visited Navy nurses in London, San Diego, and Portsmouth, Virginia. What particularly impressed you on these trips?

Well, they're trips to help educate me as the new director of the division, and help me become familiar with Navy nurses around the world. The trips are really very heartwarming. I see a great deal of concern for patient care and a tremendous amount of teamwork and commitment that you can't put a dollar value on.

I try to talk to the nurses, to give them some idea of the future, of any changes that may be coming. For instance, I explain that fiscal cuts will affect nurses just as they affect

Ob/Gyn nurse practitioners are well accepted in Navy hospitals.



RADM Maxine Conder, NC, USN

everyone else in the Navy. But I reassure them that many training opportunities available in the past will still be open. I tell them that my office is here to support their efforts, and that we're interested in all of them as individuals.

How do you feel about the cutbacks in nurse training, especially the demise of the subsidized bachelor's degree programs in nursing?

We were very sorry to lose those programs, but we continue to recognize the need for continuing education.

Will this affect recruiting?

Yes. We'll have to step up direct appointments. Everywhere I go,



they tell me they need more nurses. I'd like to support them—they can certainly justify their requirements.

Right now, we're up to billet strength. But we're very concerned about the future. We have Navy nurses out recruiting, visiting schools and professional organizations, trying to make our program well known in civilian communities. But the competition is pretty keen. We not only have the other services to contend with, but the civilian community as well. We're doing as much as we can, and the recruiters are doing a fine job. I'm hoping that students will stay aware of the opportunities provided by the military.

At the recent Surgeon General's Specialties Advisory Conference, you expressed concern that good nurses are leaving the Navy because of "overwork and unrealistic working conditions" [see *U.S. Navy Medicine*, March 1976]. Can we keep the nurses we recruit?

Retention is fairly stable now, but I'm not sure what the future will show. For one thing, more female nurses are now married, and this may harm retention. An even bigger concern of mine is that, as of 1 March 1976, a nurse's first enlistment will be for three years rather than the two years it's been in the past. We find that young women are very apprehensive about committing themselves for even two years.

I've been told we are losing nurses because of the heavy workloads, but I can't support that with figures. Every Navy nurse works very hard and gives a great deal more to her job than she might in other settings. We ask a lot of our people, and they produce. But I'm not sure how much more they can be asked to produce without it affecting morale.

Promotion opportunities can attract and retain nurses, as your own career demonstrates. There are now two nurses assigned to top-level executive positions in Navy medical facilities. Do you foresee more in

the future? Is there room for the Navy nurse to move up?

Well, I don't sense that there are a lot of nurses who want to go into executive roles. But the two nurses now in such positions have certainly

BUMED/BUPERS NURSE CORPS ROSTER

Listed below for your information and convenience are the names and duty telephone numbers of Nurse Corps officers now stationed at BUMED and BUPERS:

Code 32—Director
RADM Maxine Conder, NC, USN
(Area Code 202) 254-4202
Autovon: 294-4202

Code 32A—Executive Assistant
CDR Nancy L. Lundquist, NC, USN
(Area Code 202) 254-4221
Autovon: 294-4221

Code 321—Deputy Director and Nurse Corps Branch
CAPT Mary J. Nielubowicz, NC, USN
(Area Code 202) 254-4221
Autovon: 294-4221

Code 3211—Junior Nurse Corps Assignment Branch
LCDR Joan M. Engel, NC, USN
(Area Code 202) 254-4271
Autovon: 294-4271

Code 322—Professional Nursing Branch
CAPT Bettye G. Nagy, NC, USN
(Area Code 202) 254-4146
Autovon: 294-4146

Code 323—Planning Branch
LCDR Ann Langley, NC, USN
(Area Code 202) 254-4118
Autovon: 294-4118

Code 007—Assistant to the Inspector General, Medical for Nursing
CAPT Katherine Wilson, NC, USN
(Area Code 202) 254-4113
Autovon: 294-4113

Code 41N—Nurse Advisor for Medical Construction
CDR Phyllis J. Elsass, NC, USN
(Area Code 202) 254-4672
Autovon: 294-4672

Code Pers 4415a—Nurse Corps Liaison at BUPERS
CDR Beatrice D. Beckett, NC, USN
(Area Code 703) 694-1945
Autovon: 294-1945

proven that Nurse Corps officers are capable of assuming those roles.

In the future, I see more and more opportunity for horizontal promotion within a specialty. I feel that by allowing promotions within specialties we'll find more nurses staying with patients instead of going the administrative route, which in the past has been our only route to higher ranks. We can assure them that, yes, they can stay in their specialty area and still have an opportunity for promotion. I'm delighted with that, because patients are what we're here for. I have noticed that some of the male nurses have indicated a great interest in administration.

How many male nurses are in the Corps now, and are the duties any different from those of female nurses?

Fifteen percent of the Nurse Corps, or about 419 nurses, are males. The only difference in their duties is that they are assigned to surgical teams that go into combat areas. Other than that, we make no distinctions as far as assignments.

You mentioned that more and more Navy nurses are married. Will this make assigning them more difficult?

We're making every effort to keep husbands and wives together, but it will require a certain amount of understanding on the part of both. We're required to live within the Navy Department's rules, and we can't make up our own assignment policies. If nurses notify us as early as possible of their husbands' assignments, if they give us enough time, we can work with their husbands' detailers to try to give the couple assignments together. But there has to be an identified nurse billet at the husband's duty station.

All of our nurses should keep us informed of their plans. For instance, more of our people are buying homes. They need time to sell or rent, so close and and early



LCDR Robert Downs (NC) works with patient on the ward.

communication with the Nursing Division is very important.

We'll ask you now to do a little crystal ball gazing. What do you see in the future of Navy nursing?

I think we will make our assignments better meet our needs. We are trying to identify Nurse Corps talent and billet requirements. As an example, what does the job of operating room supervisor in a large teaching hospital require in terms of education, experience, and rank? We'll identify the talents of our Nurse Corps officers, say "these are the people that can fill the billet," and assign them accordingly. So when a commanding officer has an empty billet with certain requirements, I'll be able to meet his needs more closely.

I hope to look at the role of senior nurses in regionalization. The senior nurse in a regional center will have to assume more responsibility for assisting nurses in isolated duty stations. It has to be formalized a little more.

As far as specializing, nurse practitioners have been very well accepted. I think it's an accepted fact in both the civilian and military communities that nurses can and should function in these roles.

Military nurses are working very

closely together in the field. I think this will continue. We've established better communication between nurses of the different services.

Admiral Conder, you are one of only a few women who have reached the top level of Navy medicine and of the military. Have you experienced discrimination anywhere along the line?

I'm in an area—nursing—that has been traditionally female, so I



Intensive care aboard the *Sanctuary* (1967 photo)

haven't had the promotion problems that I might have had in another field. I certainly feel that I'm being taken seriously, and I have good working relationships with everyone here at BUMED. Yet I'm aware that I'm a nurse, and therefore not in competition with men for anything that doesn't involve nurses.

Spare time must be rare in your life, but what do you do for relaxation?

I just bought my first home, in Falls Church, Virginia. I'm learning to be a gardener and homeowner, and how to do minor maintenance jobs. After living in apartments and nurses' quarters, I'm finding yard-work frustrating but fun. Of course, in the evenings there are quite a lot of official functions associated with my job.

What are your thoughts now, looking back on your 25-year career? Would you have done anything differently?

I think I was very fortunate in selecting a career as a nurse and then in finding the opportunity to pursue this in the Navy. I've had very fine duty stations and have been provided opportunities to grow professionally as well as personally. I've enjoyed the team concept I've found in the Navy Medical Department. And of course, each promotion that has come along has certainly been career enhancing.

When I realize that I've been in the Navy a quarter of a century, it really makes me think, where has it all gone? I viewed it as so many nice duty stations, and not in terms of the number of years.

Why do you think you have made it to the top of Navy nursing? Would you call yourself ambitious?

I've enjoyed my work, and when you enjoy your work you give your all. I was enthusiastic and willing to accept more responsibility. Would you call that ambition? I just thoroughly enjoyed my life.

Scholars' Scuttlebutt

How to Get the Residency You Want

Application time is here. Scholarship students who will graduate in late 1976, or in May or June 1977, are beginning to make decisions about training that will determine to a great extent their professional future. The Navy must figure prominently in these plans.

In several ways, the plans we are now developing for your professional training differ from what we offered earlier graduating classes. First, and most important, most of you will serve an operational or non-specialty tour during your continuum of professional experience in the Navy. As presently projected, this operational tour is scheduled at the end of your first year of graduate medical education when the interruption will be least disruptive of your training, and when the experience will contribute substantially to your development as a Navy physician.

Second, we have consolidated many first-year training positions in the medical and surgical specialties into a basic medicine and basic surgical training year. These broad-based programs will provide the educational foundation for entry into specialty training.

The third difference is that this year, for the first time, we will offer you an opportunity to enter directly into a training program, in operational medicine. This program has been established at Naval Regional Medical Center San Diego, California.

We know that you have many questions about your training. Navy Medical Department program managers have already had the opportunity to discuss with many of you personally your concerns, reservations, and questions about your future. As a further help, we are publishing below general guidelines concerning the application process, a copy of the application package which will be sent to you this month, and a list of directors of medical education at the Navy's training hospitals.

GENERAL GUIDELINES

1. The Navy has discontinued seeking first-year trainees under the National Intern and Resident

Matching Program of the American Medical Association (AMA). It is essential that you, as a participant in a Navy subsidy program, know this.

2. In accordance with the provisions of the Armed Forces Health Professions Scholarship Program (AFHPSP), you are required to apply for your first year of graduate medical education in the Navy. The following schedule of dates will apply:

1 May 1976—Scholarship students entering (or about to enter) their senior year will receive a list of first-year positions available in 1977. Application forms and instructions will also be supplied.

1 September 1976—Closing date for receipt of applications in the Bureau of Medicine and Surgery.

September 1976 (exact date to be announced)—Selection committee meets in Washington, D.C., to select first-year trainees for all hospitals.

October 1976 (exact date to be announced)—Candidates advised of their selection or nonselection.

3. We plan to offer 236 first-year positions in eight naval hospitals. Programs will include basic medicine, basic surgery, operational medicine, family practice, obstetrics/gynecology, pathology, pediatrics and psychiatry.

Programs in basic medicine, basic surgery and operational medicine will be broad-based. Programs in family practice, obstetrics/gynecology, pathology and pediatrics will consist of 12 months in a single discipline. First-year training in psychiatry will consist of no more than three months of psychiatry, four months of internal medicine, and other electives.

All students who wish to continue beyond the first year of graduate medical education will be required to reapply for training.

4. AFHPSP students must list *all* naval hospitals, in order of preference, that offer the training program they desire. Candidates may also list alternate



DEPARTMENT OF THE NAVY
BUREAU OF MEDICINE AND SURGERY
WASHINGTON, D.C. 20372

IN REPLY REFER TO
BUMED-0011-SF

Dear Student:

The purpose of this communication is to provide a listing of the first year GRADUATE MEDICAL EDUCATION (GME) positions the Navy will have for training to begin during the 1977-1978 training year and to forward application forms for that training and for your appointment (promotion) in the Medical Corps.

As indicated in our previous memorandum, the Navy has discontinued seeking first year trainees under the National Intern and Resident Matching Program. In lieu of using the matching operation, a committee composed of several senior medical department officers will hold a meeting in Washington to evaluate applications. The following schedule of dates will apply:

- 1 September 1976 - Closing date for receipt of applications in the Bureau of Medicine and Surgery
- September 1976 - Selection process in the Bureau will occur.
- 21 October 1976 - Notifications of selection or non-selections for Navy programs will be mailed to all candidates. (This date may be advanced if administrative procedures permit).
- 15 November 1976 - Notifications of selections or non-selections for deferments will be mailed to those who have requested deferments of more than one year.

Enclosed please find a listing of the first year GME positions that will be available during the 1977-1978 training year. Application forms, to be submitted in duplicate, with instructions for their preparation are enclosed also. Envelopes for return of applications to the Bureau are provided. Additional information concerning the specific programs of your interest can be obtained by utilizing the postal cards that are forwarded herewith.

It is the responsibility of each student to arrange for the dean of his or her medical or osteopathic school to complete the enclosed college rank in class form and append to it a copy of his or her (the student's) up to date transcript and a letter of recommendation to be forwarded to this Bureau in one of the envelopes provided. Additional letters of recommendation can be forwarded directly to the address shown on that envelope.

Students in the Armed Forces Health Professions Scholarship Program are required to apply for training in the Navy. They are required also to list all hospitals that offer the specific training program or programs for which they have applied. Hospitals that are not listed will be added by the selection committee.

All scholarship students should prepare themselves for the contingency that numerical limitations may preclude their selection for first year programs in naval hospitals. In preparation for that contingency, they are urged to register at the appropriate time with the National Intern and Resident Matching Program (AMA) or the Intern Registration Program of the American Osteopathic Association (AOA). Of course, if a student desires to seek training on his or her own (if not selected Navy) he or she is free to do so. Those students who are selected for Navy Programs and may have registered with one of the intern placement plans will withdraw from that plan upon notification of selection by the Navy. As in the past, the Navy will continue to offer unfilled first year positions to qualified students who do not obtain positions under the AMA or AOA placement plans. Information concerning such vacancies will be available each year after the AMA or AOA placement announcements.

Armed Forces Health Professions Scholarship Students who desire an active duty deferment in order to complete training in a civilian institution (if not selected Navy) can request that deferment by providing the information requested in paragraph (4) of the application for Navy GME. As previously indicated, information will be forwarded to each candidate prior to mid November concerning those selected and not selected for deferments. Those students not selected for Navy programs or deferments will be called to active duty after completion of one year of GME in a civilian institution. In future years those officers can apply or reapply for Navy training and, if not selected, they can request a release from active duty to complete training in a civilian institution prior to completion of their remaining obligation.

It is hoped the information provided herein and the enclosures will be of service to you.

IMPORTANT

This package contains important information concerning pathways that are available to you for graduate medical education. Read it carefully and submit your application in accordance with the instructions provided.

If you will be graduating prior to May or June 1977, and you are selected for training in the Navy, your training will commence upon graduation providing the director of the program for which selected has a vacancy in his training quota at that time. If there is no such vacancy, your training will commence on 1 July 1977. The scholarship stipend will be discontinued for students in the Armed Forces Health Professions Scholarship Program on the date of completion of requirements for their degree if more than 45 days will elapse prior to receipt of the degree. Candidates who receive their degree early but cannot commence training prior to 1 July 1977, will be considered on an individual basis for temporary active service at their hospitals to await the commencement of training.

Extra copies of the application form are provided in the event you have friends or classmates that may be interested in training in a naval hospital.

From: _____
(Rank) (Name) (SSAN)

Address: _____

To: Chief, Bureau of Medicine and Surgery (ATTN: Code 314), Navy Department, Washington, D.C. 20372

Subj: Graduate Medical Education and appointment in the Navy Medical Corps; application for
(for use only by students in their last year of medical or osteopathic school)

Encl: (1) Physical condition statement

1. It is requested that this letter be considered as my application for the training program(s) that are listed below in the order of my preference and, if I hold an appointment in a Navy student program it is requested that it also be considered as my application for an appointment in the Navy Medical Corps.

PROGRAM	SPECIALTY INTEREST	HOSPITAL PREFERENCE

INSTRUCTION - Under "PROGRAM" indicate the programs of your choice as noted on the enclosed listing. If Basic Medicine or Basic Surgery is stated as a preference, indicate in column headed "SPECIALTY INTEREST" the specialty that you plan to eventually enter. Such a statement of preference will not be binding but will reflect only your interest at this time. Under "HOSPITAL PREFERENCE" list hospitals from left to right in order of preference that offer the program sought.

REMARKS

Check one of the blocks

- ☐ Prime preference is for Navy program.
☐ Prime preference is for civilian program.
☐ No prime preference.

This remarks section can be utilized to provide the selection committee with any special information you desire to have considered.

2. Enclosure (1), the statement of my physical condition, is forwarded for inclusion in my file.

3. Under separate cover I shall have the dean of my school provide an up-to-date transcript of my grades and a letter of recommendation. I understand that additional letters of recommendation can be forwarded to the Bureau of Medicine and Surgery at the address previously noted in this letter.

4. In the event a training position is not available for me in a naval hospital, it is requested that I be granted a deferment of my active service obligation until I shall have completed training in a civilian institution as noted below (applicable only to students in the Armed Forces Health Professions Scholarship Program, Ensigns 1915 and civilians).

SPECIALTY _____

TO BE COMPLETED ON _____ month/year

5. I understand that if I am not selected for training in a naval hospital and I am not granted a deferment to complete full specialty training in a civilian institution, my active service will be delayed for one year only to participate in one year of graduate medical education in a civilian institution. At the end of that period I will be called to active service. (Applicable only to students who hold appointments in Navy student programs).

Signature

Telephone Number

EXACT date of anticipated graduation
Month - Day - Year

NB: If you will complete the course requirements for your degree more than 45 days prior to the anticipated date of graduation, please indicate the completion date in this space.

I am a participant in: (Check one)

- ☐ Active Duty Medical/Osteopathic Student Program
☐ Armed Forces Health Professions Scholarship Program
☐ Senior Medical Student Program
☐ Ensign (1915) Program
☐ None of the above

SPECIALTY AND NUMBERS OF PROGRAMS OFFERED IN GRADUATE MEDICAL EDUCATION TO GRADUATING STUDENTS 1977 - 1978 TRAINING YEAR

	FAM PRAC	OB/GYN	PATH	PEDS	PSYCH	BASIC MED	OP MED	BASIC SURG	TOTAL
CAMP PENDLETON	9								9
CHARLESTON	9								9
JACKSONVILLE	9								9
PENSACOLA	8								8
BETHESDA		3	3	3	4	21		13	47
OAKLAND		3	2	3	3	17		13	41
PORTSMOUTH VA		6	2	5	4	18		13	48
SAN DIEGO		4	3	5		32	5	16	65
TOTAL	35	16	10	16	11	88	5	55	236

SPECIAL NOTES: (A) 1st yr programs in Fam Prac, OB/Gyn, Path and Peds will be 12 months in a single discipline.

(B) Programs in Psych will offer a broad-based clinical year to include 4 months in Int Med, not more than 3 months in Psych, plus electives.

(C) The Basic Med and Basic Surg training year will contain a minimum of 4 months of Int Med, 4 months of Surg, plus electives. These programs are structured in order to provide the trainee with the background required to enter training in specific specialties at later dates. Current plans are that trainees in Basic Med will be prepared to enter residency programs in Anes, Derm, Int Med, Neuro, Ophth and Radio. Basic Surg trainees will be prepared to enter residency programs in all surgical specialties including Oto, Ortho, Urol, Gen Surg and Neuro Surg. Ample opportunity will exist for crossovers into other specialties after completion of the first year of Graduate Medical Education in any of the programs listed in the breakdown at the top of this page.

(D) Operational Med will offer a broad-based clinical experience including 4 months of Int Med, Surg and electives in clinical and Operational disciplines which will prepare the trainee for advanced training in the broad field of Operational Med with eventual board eligibility in Preventive or Occupational Medicine.

(E) Electives will be offered according to the trainee's preference as approved by his or her program director.

(F) All selections for first year GME are for one year only. All trainees who desire to continue training beyond that year must reapply upon reporting to their training hospital.

program preferences, with hospital preferences for these alternate choices. AFHPSP students who do *not* list all naval hospitals that offer their desired program will be assigned preferences for the unlisted hospitals. Additional specialty preferences will not be assigned, however.

It is important that candidates for all basic medicine and basic surgery programs state the discipline in which they are currently interested. Candidates may use the "remarks" section of the application to draw the selection committee's attention to any important personal considerations.

5. Selection for Navy programs: AFHPSP students who are selected for a training program in a naval hospital will be *required* to enter that program. Scholarship students who state inappropriate preferences for specialties not listed as available (such as pediatric allergy, gastroenterology, plastic surgery, etc.), will be considered for training positions in the basic specialty—pediatrics, basic surgery, basic medicine, etc.

6. Nonselection for Navy programs: Scholarship students not selected for training programs in a naval hospital will be so advised, and will be free to seek first-year graduate medical education positions in the civilian sector.

7. Active duty deferments: At the same time they apply for Navy training programs, AFHPSP students who desire a full residency in a civilian institution must request permission to delay serving their active-service obligation in order to undergo such training. The civilian institution need not be named, but the desired specialty and length of the delay must be clearly stated. Students *not* selected for Navy programs will be advised in time to allow them to submit lists of preferred civilian institutions to the National Intern and Resident Matching Program (AMA) or the Intern Registration Program of the American Osteopathic Association (AOA).

Students who are not selected for Navy programs, nor for active-duty delays to complete full training in a specialty, will be assured of a maximum of one year's delay in order to complete an internship or the first year of graduate medical education in a civilian institution. Prior to 15 August of this "delayed" year, they may reapply for training in the Navy; if not selected, they may then apply for a deferment to complete a full residency.

If applications for second-year positions or deferments cannot be approved, students will be called to

active service as general medical officers at the end of their first year of training. In subsequent years they will be eligible to apply or reapply for residencies in naval hospitals. If not selected, they may apply or reapply for release from active duty in order to pursue a residency in a civilian institution; upon completion of training, they must return to active service to fulfill their remaining obligation.

All requests for residencies and active-duty delays will be considered in light of the Navy's anticipated needs. Candidates are cautioned that requests to complete full specialty training, whether in a naval hospital or a civilian institution, may not be approved. The needs of the Navy must remain paramount. However, all candidates are assured of completing one year of graduate medical education in either a Navy or civilian program.

Students who will begin their first year of graduate medical education in 1976 have been advised by separate correspondence of the procedure through which they can apply for further training in the Navy, or for active-duty delays to complete full specialty programs.

It is essential that all scholarship students prepare themselves for the contingency that numerical limitations may preclude their selection for first-year programs in naval hospitals. Candidates are urged to register with the National Intern and Resident Matching Program (AMA) or the Intern Registration Program (AOA). Of course, students who wish to seek training on their own if not selected by the Navy are free to do so. Students registered with an intern placement plan will withdraw from the plan if selected for a Navy program.

As in the past, the Navy will offer unfilled first-year positions to qualified students who do not obtain positions under the AMA or AOA placement plans. Information concerning such vacancies will be available each year after the AMA and AOA placement announcements are made.

8. Students are urged to visit the naval hospitals in which they are interested for interviews, the results of which are forwarded to BUMED to become part of the student's application file. Interviews must be completed prior to 15 August 1976; results must be received in BUMED before 25 August. Candidates should not consider a program director's indication of acceptance as the final placement determination. It is not uncommon for two or more program directors to state a preference for the same candidate, and in such cases, a decision must be made through the internal Navy matching operation. The

results of this matching may place a candidate in a hospital or a program that is lower on his preference list than anticipated.

9. The provisions of these guidelines that pertain to active-duty delays and the requirement to state multiple hospital preferences do not apply to students in the Medical and Osteopathic Scholarship Program (MOSP) or the Senior Medical Student Program (SMSP). These students may continue to apply to as many Navy and civilian programs as they desire. However, they may participate in civilian training programs only during their first-year of graduate medical education. Application procedures for training in naval hospitals are as stated in these guidelines, and the schedule of dates pertains.

PROGRAM DIRECTORS

CDR R. Higgins, MC, USN
Naval Regional Medical Center
Charleston, South Carolina 29403

CAPT J.W. Norton, MC, USN
Naval Regional Medical Center
Camp Pendleton, California 92055

CDR C.L. Gaudry, Jr., MC, USN
Naval Regional Medical Center
Jacksonville, Florida 32214

LCDR E.L. Taylor, MC, USNR
Naval Aerospace and Regional Medical Center
Pensacola, Florida 32512

CDR D.R. Cordray, MC, USN
Naval Regional Medical Center
Portsmouth, Virginia 23708

CAPT C.R. Sargent, MC, USN
Naval Regional Medical Center
San Diego, California 92134

CAPT V.L. Goller, MC, USN
Naval Regional Medical Center
Oakland, California 94627

CAPT D.A. Murray, MC, USN
National Naval Medical Center
Bethesda, Maryland 20014

At the Bureau of Medicine and Surgery:
CAPT Joseph S. Cassells, MC, USN
BUMED Code 0011
Phone: (202) 254-4279

CDR Clarence B. Mohler, MSC, USN (Ret.)
BUMED Code 314
Phone: (202) 254-4339

At the Naval Health Sciences Education and Training Command:
CDR Brian G. McAlary, MC, USN
HSETC Code 4, Bethesda, Md.
Phone: (301) 295-0648

Notes & Announcements

SECOND YEAR COMPREHENSIVE DENTISTRY RESIDENTS NAMED

The second-year residency program in comprehensive dentistry has been expanded from eight to ten residents. Dental officers selected to continue into the second-year program in FY77 are: CDR Frank U. Perry, and LCDRs Carl J. Coleman, James D. Arnold, Toby G. Cothorn, Earl F. Eschete Jr., Steven A. Fertig, James G. Fleming, Larry F. Hellman, Larry V. Kuhl, and Thomas L. Silverthorn.—BUMED Code 6111.

DENTAL RESERVE SEMINAR HELD

A Naval Reserve dental seminar was held at BUMED 29 March-2 April 1976 to enable Reserve dental officers on inactive duty to review the objectives, policies, and programs of the Naval Reserve dental program. The seminar included presentations by officers assigned Reserve functions in the office of the Chief of Naval Operations, the Chief of Naval Personnel, and the Chief, BUMED.—BUMED Code 6111.

269 CORPSMEN SELECTED FOR ADVANCED TRAINING

The "C" School Selection Committee that met last March selected 269 hospital corpsmen for advanced training (see chart on page 14).

Many applicants who met the eligibility criteria could not be selected because of limited quotas. All corpsmen who request advanced training are therefore encouraged to indicate a first and second choice of training, and to consider applying for courses with a large number of unfilled spaces. Applicants who did not meet eligibility standards for further training should be counseled on the prerequisites and encouraged to correct deficiencies. The large number of highly qualified applicants competing precludes favorable consideration of personnel who require general classification test/arithmetic (GCT/ARI) waivers, or who have poor performance evaluations or recent disciplinary problems.

The selection committee is concerned that some well-qualified applicants are poorly presented; for example, many requests for training contain erroneous information. The applicant and his command should verify all information on the application. To ensure that all applicants receive equal consideration, the next change to the *Catalog of Navy Training Courses* will require submission of performance evaluations for a three-year period, a duty history, and an interview.

The committee will meet again in June to select corpsmen for training starting January through March 1977. Meetings will be held twice a month thereafter to consider applicants for training in specialties with unfilled quotas.—BUMED Code 34.

Course	Number of Requests	Quota	Number Selected
Nuclear Submarine Technician (8402)	31	54	28
Aerospace Medicine Technician (8406)	11	40	5
Nuclear Medicine Technician (8407)	3	8	1
Cardiopulmonary Technician (8408)	25	1	1
Aviation Physiology Technician (8409)	2	3	0
Clinical Nuclear Medicine Technician (8416)	7	0	0
Medical Services Technician (Independent Duty Technician) (8424/8425)	45	31	20
Preventive Medicine Technician (8432)	25	22	15
Transplantation Technician (8433)	5	0	0
Ocular Technician (8444)	17	32	16
Otolaryngology Technician (8446)	6	6	4
X-ray Technician (8452)	29	13	10
Electroencephalography Technician (8454)	6	6	3
Optician Technician (8463)	6	10	3
Physical and Occupational Therapy Technician (8466)	40	8	8
Medical Photography Technician (8472)	2	4	2
Biomedical Equipment Tech., Basic (8477)	23	7	7
Biomedical Equipment Tech., X-ray (8478)	5	6	2
Biomedical Equipment Tech., Electronic (8479)	3	10	3
Pharmacy Technician (8482)	20	49	15
Operating Room Technician (8483)	49	120	42
Neuropsychiatry Technician (8484)	21	63	17
Urology Technician (8486)	7	14	6
Special Operations Technician (8492)	10	32	8
Medical Deep Sea Diving Technician (8493)	6	20	4
Dermatology Technician (8495)	5	1	1
Laboratory Technician, Basic (8501)	49	44	23
Histology Technician, Basic (8502)	2	5	1
Cytology Technician, Basic (8504)	0	6	0
Cytotechnology Technician (8505)	0	4	0
Medical Laboratory Technician, Advanced (8506)	37	56	18
Medical Technologist Technician (8507)	6	6	6
Total	503	681	269

FLIGHT SURGEON BILLETS AVAILABLE

With fewer flight surgeons on active duty involving flying, many interesting and challenging billets are available. Flight surgeons who are approaching a release from active duty or rotation date may request a change of duty, if they agree to remain for at least one year at a new duty station within the continental United States, or for the required tour length if assigned overseas.

Reserve flight surgeons who have received release from active duty orders may be eligible for transfer to a vacant billet of their choice if they agree to extend their period of active duty.

Flight surgeon billets are or will soon be available at:

Arizona: Branch dispensary, MCAS Yuma.

California: NAF El Centro; 3rd MAW, El Toro; VA-127, CVW-15, and aeromedical safety operations,* Lemoore; Naval Air Reserve Unit, North Island, San Diego; CVW-19, NAS Miramar; HS-10, Imperial Beach; and branch dispensaries at El Toro, Miramar, North Island, Imperial Beach, and Moffett Field.

Florida: Branch dispensaries at NAS Jacksonville and NAS Cecil Field.

Hawaii: Branch dispensary and 1st Marine Brigade, MCAS Kaneohe; VP-22, Barbers Point.

Maine: Branch dispensary and VP-44, NAS Brunswick.

Maryland: Naval Hospital and VX-1, Patuxent River.

Michigan: NAF Detroit.

New Jersey: Branch dispensary, NAS Lakehurst.

North Carolina: 2nd MAW, MAG-32, and aeromedical safety operations, Cherry Point; MAG-26 and MAG-29 New River, Jacksonville.

Okinawa: VC-5 (Kadena); Naha; 1st MAW.

Pennsylvania: Naval Air Development Center, Warminster; branch dispensaries at NAF Warminster and NAS Willow Grove.

Republic of the Philippines: Branch dispensary, Cubi Point, Subic Bay.

South Carolina: Branch dispensary, MCAS Beaufort.

Tennessee: Branch dispensary, Memphis.

Texas: Branch dispensary, NAS Corpus Christi.

Virginia: HM-12, Norfolk; branch dispensaries at NAS Norfolk and Oceana (Virginia Beach).

Washington: Naval Hospital, Naval Air Reserve Unit, and VAQ-129, Whidbey Island, Oak Harbor.

For details about any billet, contact CAPT William Simmons, MC, USN, Department of the Navy, Bureau of Medicine and Surgery (Code 511), Washington, D.C. 20372. Phone (Area code 202) 254-4361 or Autovon 294-4361.—BUMED, Code 511.

*Aeromedical safety operations (AMSO) flight surgeons will attend a six-week aviation safety course at Monterey, California, before being assigned to a flight surgeon/physiologist occupational medical and accident investigation AMSO team.

NAVMED Newsmakers

The first Outstanding Physician's Assistant Student of the Year is a Navyman—HMC **Thomas S. Clayton** of Naval Regional Medical Center Camp Pendleton, California. He won the new award, to be given annually by the American Academy of Physician's Assistants, for his work promoting the PA program. Two of HMC Clayton's publicity coups: decals and bumper stickers introducing "Medicine's Newest: Physician's Assistant," and radio and TV coverage of the PA phenomenon. As a PA student, HMC Clayton helped form the AAPA's military affairs committee, and was president of the AAPA's student society.

Most of us only know the remote areas of Baja California through the pages of *National Geographic*. But HMC **Larry Martin** gets a lot closer as a member of the Flying Samaritans, a nonprofit group that provides medical and dental aid to people in remote villages of the Mexican peninsula. A pharmacy instructor at the Naval School of Health Sciences, San Diego, HMC Martin volunteers one weekend a month with the airborne medical team. "It's rewarding when we treat somebody with a hare lip or cleft palate," he says, "and four or five years later they look completely different."

Every Easter and Christmas for the past 34 years, the Navy's own fairy godmother has visited the wards of the National Naval Medical Center, distributing gifts to bedridden servicemen. She's Mrs. **Ambrosia Clarke**, one of thousands of volunteers being saluted during National Volunteer Week (16-22 May). Mrs. Clarke, 80, writes hundreds of letters each year requesting contributions for her "boys." Last summer, her friends honored her unflagging energy and generous spirit with a testimonial dinner, complete with admiring letters from President Ford, Maryland Senators Mathias and Beall, and other civilian and military leaders. But the acclaim didn't go to her head: Mother Clarke was back on the wards at Easter again this year.

The Flying Samaritan

When LCDR **Erich "Pete" Stafford** (MSC), a parasitologist with U.S. Naval Medical Research Unit No. 2 in Jakarta, Indonesia, set out to study schistosomiasis at Lake Lindu, the only way to get there was by footpower or horsepower. LCDR Stafford didn't bat an eyelash, even if his Sulawesi mount wasn't quite as noble as the quarterhorses he raises back home in Kentucky. But what's the castaway cowboy doing with that pole? Punching snails? Only his horse knows for sure.

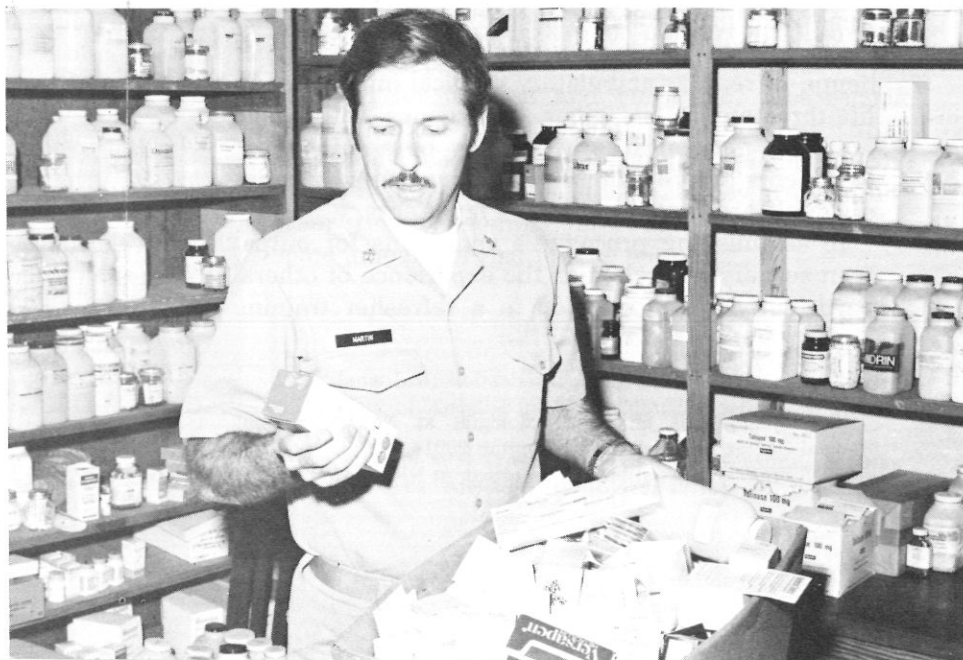
Congratulations to Medical Department members who have all been newsmakers in recent months: CAPT **Douglas R. Knab** (MC), first Navy medical officer named department chairman at the Uniformed Services University of the Health Sciences. He'll head the department of obstetrics and gynecology . . . HN **Barbara J. Porter**, first black female to graduate from Aerospace Medicine Technician's School . . . and three women making their presence felt at NRMIC Philadelphia: CAPT **Betty Meriwether** (MC), named head of the Ob/Gyn department last December; CDR **Barbara Munroe** (MSC), who in addition to duties as head of the occupational therapy department is also chief of the medical center's security service—strictly male territory until she came along; and HM3 **Susan Beaman**, the only woman on the ambulance crew.



NNMC's Godmother



Navy Snail Puncher



On Duty

Learning the Ropes

ENS Arthur C. Tate (MSC) has never gone round the world in 80 days. But he *has* gone round Naval Regional Medical Center San Diego in 31 days. And so do all newly commissioned Medical Service Corps officers assigned there, in a thorough indoctrination program that takes them through each department of that complex regional medical center.

In the indoctrination course, the new MSC officer spends a few days in each major service or area, learning the ropes by participating in that area's work. He accompanies chiefs of service on their inspections, attends board and committee

meetings, and completes written assignments to reinforce the practical experience. In this way, he gets to know the particular problems of each service and has a chance to suggest possible solutions.

There are actually two orientation programs for MSC officers at San Diego—one for specialists such as chemists and bacteriologists, the other for generalists in health care administration. Last year, ENS Tate was in the latter group.

Before ENS Tate arrived, the medical center's commanding officer sent a notice to chiefs of service outlining their responsibilities in the indoctrination program. The

notice included a biography of the new officer, and his orientation agenda.

ENS Tate's first stop was the CO's office for a welcome aboard from the public affairs officer. Then on to patient affairs, to see how patients are admitted and discharged, and where their records are kept.

The next two days found ENS Tate in the Outpatient Service. There he became conversant with CHAMPUS (Civilian Health and Medical Program of the Uniformed Services) and clinic appointment procedures, and with the medical center's terminal digit filing system. After that he boned up on flow charts in data processing and studied the functions of the comptroller and supply services. Next came the Nursing Service, where chief nurse CAPT Doris Cornelius took him on ward rounds and to a supervisor's meeting.

In the Operating Management Service, ENS Tate was shown how the medical center's housekeeping, laundry, mail, messenger and duplicating services are run. Then came two days as an apprentice staff civil engineer, absorbing public works terminology, plans and estimates, maintenance and repair.

In the center's administrative office, ENS Tate attended a planning board session and chiefs of service meeting, reviewed press release procedures, and learned medical center organization. Later, in the Civilian Personnel Office, he prepared a flow chart illustrating an employee's progress from job application to first paycheck, and studied formal grievance procedures, the Civil Service Register, and typical position descriptions.

After pharmacy technicians had shown him how drugs are prepared and dispersed at the medical center, ENS Tate spent four days at a branch dispensary, where he picked up information on health record maintenance and dispensary organization. Finally, back at the medical center, the Security Service showed him mast, search and

Learning the ropes includes visits to the Food Service . . .



U.S. Navy Medicine



... Nursing Service ...



... and Outpatient Records.

seizure, and lawful evidence procedures. The last visit in ENS Tate's odyssey was to the Food Management Service, where he was initiated into the mysteries of soup du jour, and brushed up on clinical nutrition and accounting for rations.

This compressed course in the workings of a large hospital is enough to leave anyone's head spinning. But ENS Tate thinks that learning by doing is a pretty good way to start a career in hospital administration. And whenever he has to deal with problems in any of these areas he'll have the advantage of knowing the job as an insider. He's worked there.

BUMED SITREP

NAVY GETS OKINAWA . . . Specific transfer dates have not been set, but the U.S. Army Hospital in Okinawa and the medical laboratory in Japan should be turned over to the Navy by October 1977. The Navy will also assume entomology support at White Beach, Okinawa.

REALIGNMENT STUDIED . . . NRM Philadelphia may be reduced or closed as a result of the Navy's latest shore establishment realignment and reduction action. The hospital at Philadelphia has been nominated for possible reduction as part of the Navy's need to reduce overhead support personnel and costs connected with its base structure. Also being studied is possible reduction of NH Key West, Florida, to a regional clinic. Final decision depends upon outcome of further studies.

VERNAL HIATUS . . . Medical Corps, Medical Service Corps, and Nurse Corps officers of the inactive Reserve are urgently needed for *Operation Vernal Hiatus*, a mobilization exercise designed to test the effectiveness of Reserve augmentation of BUMED-managed shore activities. The exercise is scheduled for July and August. All affiliated Reservists are eligible for participation regardless of training/pay category. Interested medical Reservists should contact their Naval District Medical Reserve Program Officer for further details.

RETIREMENT PAY UNDER DOPMA . . . The *American Dental Association News* recently reported that, under the proposed Defense Officer Personnel Management Act (DOPMA), career dental officers who came on duty after 1958 and who retire short of a 30-year career would not receive the usual 2-1/2% per year base pay credit for years spent in civilian dental school. This information is not correct.

DOPMA is not intended to affect the future retired pay of officers currently on active duty. A revision to the Act is being prepared to ensure that the current save-pay provisions of the bill clearly reflect this fact. DOPMA will, however, affect computation of retired

pay for medical and dental officers appointed after its enactment.

NERVE REGENERATION . . . The Navy is conducting a research program to investigate nerve regeneration and reimplantation, major obstacles in the successful treatment and repair of severely injured limbs. The biochemical, physiological, and morphological aspects of the nerve regenerative process are being studied, with the goal of developing new surgical and therapeutic techniques to improve the regeneration of nerves. Researchers hope to find ways to increase the functional capacity of injured limbs, and reduce the degree of disability associated with this type of injury.

WARNING FOR DENTAL PERSONNEL . . . An explosion of the bulb used in the Pelton Crane "Light Fantastic" Model LF Plus has been reported to BUMED. The patient and attending dental personnel involved escaped injury only because of the protective plastic safety shield, which was badly damaged. The Pelton Crane Company assures BUMED that such an explosion is rare. Nevertheless, it must be considered an ever-present hazard. This light should never be used without the protective plastic shield in place.

HEALTH AFFAIRS . . . No successor has yet been named for Dr. James R. Cowan who resigned as assistant secretary of defense for health and environment on 1 March. Under a recent DOD reorganization, the post becomes assistant secretary for health affairs, losing its responsibility for environmental problems. The new assistant secretary will report to the Secretary of Defense through the assistant secretary for manpower and reserve affairs.

USUHS REGENTS NAMED . . . President Ford has named former DOD Secretary David Packard and retired Army LTGEN Leonard Heaton to second terms on the Uniformed Services University of the Health Sciences' Board of Regents. Francis Moore, M.D., has been named to fill the former chair of Malcolm Todd, M.D., past president of the American Medical Association.

Education & Training

O.R. nurses learn . . .

The Care and Comfort of Surgical Patients

"Operating room nursing is *not* just a mechanical, technical process. To be an effective O.R. nurse, you have to see the patient as an individual, not a 'case'." The soft sound of LCDR Vicki Schneider's Southern vowels belies her determination that her students in the Navy's year-old operating room nurse orientation program treat patients as more than the sum of their parts.

LCDR Schneider is one of two instructors—LCDR Kirby Ferrell (NC) is the other—in the concentrated six-week course, which gives neophyte O.R. nurses a concrete foundation in operating room technical and human relations skills. The centralized, formal training saves local commands precious training time and money by arming the new O.R. nurse with basic skills so that, when she returns to her duty station, she is ready to pitch in.

The course, which handles three students per session, was started

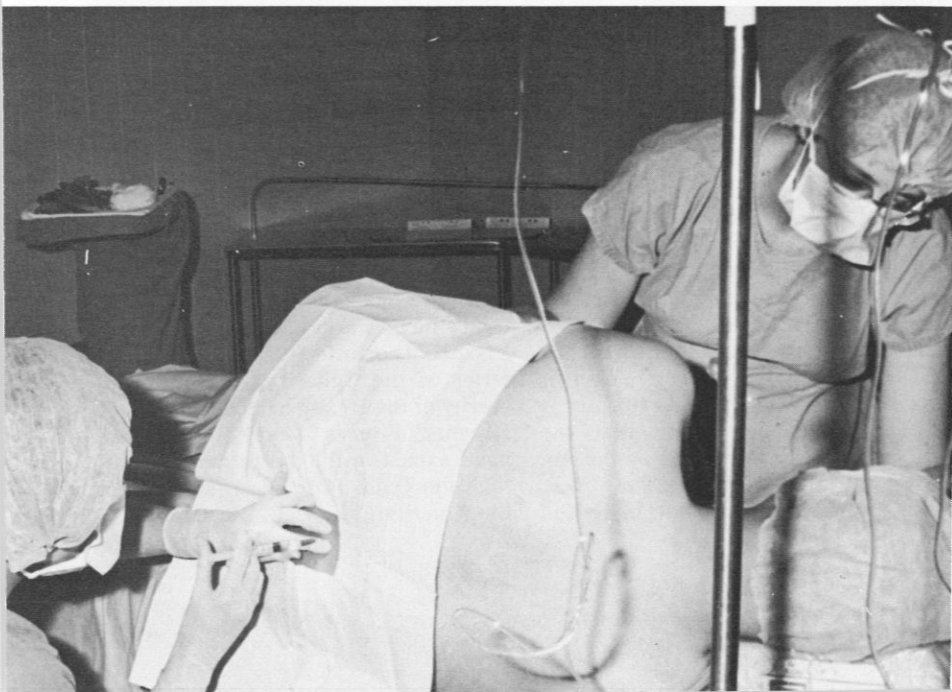
for two reasons, explains CDR Ruth A. Wilson (NC), director of Nurse Corps Programs at Naval Health Sciences Education and Training Command (HSETC). "There was a

severe shortage of O.R. nurses in the Navy at the time this program was implemented," she says. "And many bachelor's degree programs for nurses do not give the student clinical operating room experience."

The Navy's programs are offered at Naval Regional Medical Center Charleston, South Carolina and Camp Pendleton, California. Students spend their first week in the classroom before plunging into actual circulating and scrubnursing in the operating room. Their curriculum covers O.R. technique, history of surgery, terminology, ethics and



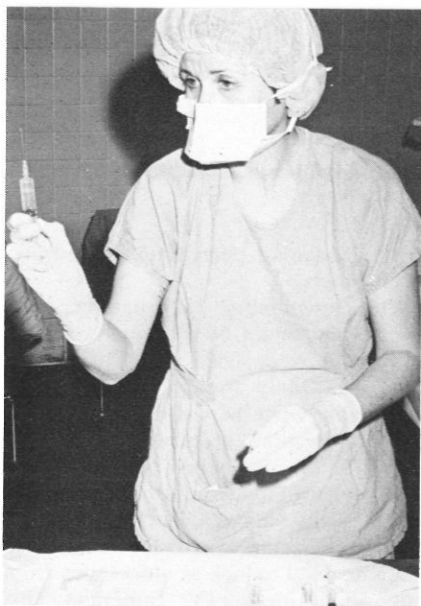
O.R. training: Everything from sponge counts . . .



law of O.R. nursing, patient care during surgery, and sensitivity to the patient's needs. Throughout the training, the art of creating a warm patient-nurse relationship is emphasized. "You have to be constantly aware of your feelings, of what motivates your behavior and how it comes across," LCDR Schneider says. "Words are not always the best way to communicate that you care. With a movement, the touch of your hand, and other nonverbal cues you can show warmth and sincerity." Students practice this approach by staging

. . . to administering spinal anesthesia.

U.S. Navy Medicine



LCDR E. Foreman, nurse anesthetist

Dental Continuing Education Heats Up

Every Navy dental officer on extended active duty should have the chance to attend one continuing education course, review course or professional conference each year—that's the gist of recent BUMED guidelines on continuing dental education.

Among dentists, continuing education is a hotter issue than ever. Since 1970 six states have enacted continuing education requirements for dentists to renew their license; 28 others are considering such requirements. (Although Navy dentists don't have to be state-licensed, BUMED prefers that they meet civilian standards.) Specialty certification boards, too, are expected to move toward stricter continuing education requirements.

BUMED Instruction 1520.20 of 8 January 1976 spells out what type of dental continuing education BUMED will fund through the Naval Health Sciences Education and Training Command. Normally, dental officers can be funded for only one continuing education course (including board review courses) or professional conference a year. The event is not to be longer than five days, although a dental officer's command can extend this time without per diem through authorization orders or leave.

Distance is restricted, too. Dental officers are usually not funded for cross-country travel except to appear as clinicians at major dental courses or meetings. (The mid-United States—the Chicago, Houston, Minneapolis and New Orleans areas, for example—are not considered cross-country from either coast.) Travel to more than one location for an event is not permitted.

Dental officers stationed in Alaska, Argentina, Iceland, Puerto Rico and Cuba can be funded to attend programs in the 48 contiguous

United States. Dental officers assigned to other overseas areas, however, are not funded for courses in the United States, although they may attend events in their area when funding and military operations permit.

A requirement of Navy sponsorship is that the training must meet the Navy's practical needs. Training in orthodontics, hypnosis, dental implantology, and acupuncture will not be funded.

Certain courses do not count as the "one funded course per year." These include management seminars and executive medicine courses for captain selectees and other dental officers assuming management responsibilities, casualty treatment training courses, and courses required for accreditation of dental training programs.

Dental officers who are in training, including residents and post-doctoral fellows, are funded only for continuing education courses, not for conferences.

By the 10th day of each month, commanding officers of BUMED-commanded dental facilities, and senior dental officers of other Navy dental facilities should report what continuing education courses/conferences their officers attended in the previous month. The report should be sent to the Naval Health Sciences Education and Training Command (Code 5), National Naval Medical Center, Bethesda, Maryland 20014 with a copy to BUMED Code 6112.

Table clinics, Dental Corps style



mock preoperative visits, exchanging the roles of nurse and patient.

The climax of the six weeks is a case study or project. One student, slated to be an O.R. supervisor at her command, drafted a manual for O.R. nurses. Students have also devised new preoperative assessment sheets, and conducted preoperative counseling sessions to teach groups of patients what to expect before, during and after their operation.

A ward nurse starts her journey to the operating room by asking her supervisor for an O.R. assignment and permission to attend orientation. If there is a vacancy, and if the nurse can be released from nursing service, the command submits an application to HSETC in accordance with BUMED Instruction 1520.8D. The command must confirm that the nurse will be assigned to O.R. duty on completion of training. If the request is approved, the student's temporary additional duty orders are funded by HSETC.

Requests for O.R. training should be submitted at least four weeks ahead of the desired session. Navy nurses who want convening dates or more information should contact the Nurse Corps Programs Directorate, Naval Health Sciences Education and Training Command, Bethesda, Maryland 20014. Phone: (Area code 202) 295-0630; Autovon 295-0631.

Letters

SALUTING USS CHICAGO

Your March 1976 cover photograph of "fleet support in action" is appropriate in highlighting the primary mission of the entire Navy Medical Department. Since the photograph involves the USS *Chicago* (World War I version), it is coincidental, yet appropriate, to report on an "outstanding" adjectival grade awarded the Medical Department in the present USS *Chicago* (CG 11). The following excerpt from COMNAVSURF-PAC's recent message to USS *Chicago* says it all: "Subject inspection conducted 19 March 1976. . . . Areas inspected included medical administration, emergency medical preparedness, and medical material management. All areas evaluated achieved an adjective grade of outstanding, a status achieved by less than five percent of all NAVSURFPAC ships. Congratulations, well done, and keep charging."

USS *Chicago* (CG 11) is commanded by CAPT J.L. Beck, USN. The medical department is administered by LT Robert D. Hufstader, MC, USNR, and HMCS Max C. Weissenfluh, USN.

LCDR B.L. Ozment, MSC, USN
Medical Administrative Officer
Staff, COMNAVSURFPAC (N13)
San Diego, California 92155

BEARDS AND MASKS

Your note on methyl bromide poisoning [*U.S. Navy Medicine*, March 1976, p. 27] implied that gas masks (properly called protective masks) are acceptable for use in routine procedures requiring respiratory protection or oxygen. This is not correct. Protective masks are designed to provide passive protection against toxic chemicals, biological agents, and radioactive particles. They will not protect an individual when the oxygen concentration falls below 16%. Protective masks are filters of contaminated air; they do not provide oxygen when there is none.

In the incident described in your note, had the engineman been wearing a properly fitted protective (gas) mask, he certainly would have been protected from methyl bromide. But, since it is denser than air, the methyl bromide would have displaced most of the air

from the space, and the oxygen content would have been less than that required to support life. The man would have been a casualty anyway.

In fact, the man was wearing an oxygen breathing apparatus (OBA) which supplies clean air. Had he been able to obtain a proper seal, he would have been fully protected against both methyl bromide and the low oxygen content of the space. The man complied with local regulations requiring a self-contained air source, and was properly supervised. His face mask did not seal properly because of his 3- to 5-day growth of facial hair.

The effect of facial hair (beards) on mask seals is a continuing problem. It is the opinion and experience of those who routinely use some sort of respiratory protector that beards can, and usually do, interfere with proper sealing of the mask to the face. The extent of interference depends on the type of beard and type of mask. Some beards can be accommodated by protective masks, but not by OBA masks. And it is during the first 2 to 6 days of growth, when the hairs are too short to lie down properly, that it is most difficult to obtain a proper seal. A full-grown and properly groomed beard will lie flat. It may then be possible to effect a good seal.

The time to check the fit and seal of any type of respiratory protective device is long before it is necessary to wear the equipment. If a man's beard prevents him from properly sealing his mask to his face, he should either be reassigned or told to shave.

LCDR L.L. Laughlin, MSC, USN
BUMED, Code 5512

WOULD YOU BELIEVE . . .

In January 1975, the staff of the USS *Enterprise* (CVAN-65) Medical Department saw the first cases of a strange new malady. Patients reported to sickbay complaining of mild to severe bilateral knee pain; nearly 50% of the patients complained of gluteal discomfort.

The source of these knee pains, we found, was circular abrasions on one or both knees. Examination of the buttocks of patients complaining of gluteal discomfort revealed bilateral erythema

with occasional petechiae and, rarely, ecchymosis.

On questioning the patients, we found that onset of the symptoms occurred between 0800 and 1400 on 15 January. Oddly enough, no one could remember what he was doing when the symptoms first occurred, or indeed anything that happened on that day.

A review of food, laundry procedures, work habits, living quarters, weather, and other factors was inconclusive. We then decided to look at videotapes from the flight deck TV cameras. This showed what had happened: mass hysteria had seized everyone on the flight deck! Most of those on deck were crawling about on all fours—hence, the knee abrasions. Others were wallowing in pits of slop and garbage from the mess decks. Some were vainly trying to blow water out of the pad eyes on the flight deck.

Mystified, we reviewed the ship's log of 15 January and found that the *Enterprise* had crossed the equator that day at 0843. Here was the missing clue.

We theorize that this mass hysteria occurs only within 50 miles on either side of the equator. Consideration of possible causes points to a virus found only in equatorial regions and only at sea. The area of infestation coincides almost exactly with the known range of the common equatorial sea bat. We suggest that the virus is spread in the feces of this small, retiring mammal which flocks high above ships at sea during the night.

Since there are about 58.7 billion sea bats, eradication is obviously impractical. The Navy might erect large umbrellas over all ships in equatorial waters to intercept the bat feces; however, we don't see this as cost effective.

We suggest a full epidemiological study of this phenomenon. Tentative plans are to establish a relapsing equatorial delirium research center in Olongapo City, R.P., where there is usually a large supply of willing subjects.

CDR Tom Turner, MC, USN
LCDR Albert E. Cram, MC, USNR
LT Otis V. Thomas, Jr., MC, USN
Medical Department
USS *Enterprise* (CVAN 65)
FPO San Francisco 96601

U.S. Navy Medicine

Does Man Have Tumor Antibodies?

CAPT Charles W. Ochs, MC, USN

Many tumors in animals and man possess tumor-specific antigens (1,2,3) by which the host recognizes the tumor as "foreign" to the body, inducing an immune response. Cell-mediated immunity plays a major role in this response, and can be measured by a number of clinical tests. In one commonly used nonspecific *in vitro* test of cellular immunity, plant mitogens (phytohemagglutinin and concanavalin A) stimulate "T" (thymus-derived) lymphocytes to undergo blastogenesis and consequent DNA synthesis (4). The resulting increase in DNA synthesis can be ascertained by measuring the incorporation of tritiated thymidine into DNA. This test can be made specific through use of a specific antigenic material, such as intact tumor cells or soluble tumor extracts, as a stimulant.

A specific test of immune function is the so-called macrophage inhibition test (5), which measures the release of one of the lymphokines* called migration inhibition factor (MIF). Released lymphokines may be measured by a sensitive indicator system employing guinea pig macrophages.

At the National Naval Medical Center, Bethesda, Maryland, we evaluated a patient who demonstrated evidence of tumor antibody interaction against pulmonary metastatic disease. The metastatic lesions underwent an unusual cavitory process, remained small, and were clearing at the time of the patient's death. There were no pulmonary symptoms despite extensive metastases.

CAPT Ochs is chairman of the Radiology Department, National Naval Medical Center, Bethesda, Maryland 20014.

The author expresses his appreciation to CAPT K. Sell (MC), CAPT M. Dolan (MC), and CDR E. Perlin (MC) for assistance with this case.

*A lymphokine is a substance released by lymphocytes on contact with antigen.

CASE REPORT

On 21 August 1973, a 45-year-old Caucasian woman was evaluated for intermenstrual bleeding. Cervical biopsy disclosed squamous carcinoma, stage II-B. She was given 4860 rads Co⁶⁰ teletherapy, with moderate regression of her tumor. This was followed by intracavity radium, using the Fletcher applicator. The total dose was 4940 mg hours.

The patient did well until April 1974 when she noted a mass in the left supraclavicular area. A chest X-ray at that time revealed widespread pulmonary nodules (Figure 1). Most of these nodules had lucent centers, and cavitation was confirmed by tomography (Figure 2). A biopsy of the left supraclavicular node demonstrated squamous cell carcinoma.

The patient was admitted to the hospital on 10 April 1974 and discharged after a complete tumor work-up revealed no other metastatic disease. The extensive pulmonary lesions remained unchanged for two months, but did not impair her pulmonary function.

The most commonly cited cause for cavitation of a nodule is local circulatory inadequacy, which may occur when the tumor outgrows its blood supply. Another possibility is local infarction due to occlusion of the vessels by the growing tumor. We did not consider either explanation likely in this case, since cavitation was apparent in nearly all nodules, even those as small as 5 mm. Could an immunological mechanism be responsible for the "autolysis" of her pulmonary metastatic disease? An evaluation of her immune response was therefore performed.

Response to phytohemagglutinin and concanavalin A was muted by a plasma inhibitor of uncertain nature. Such blocking factors may interfere with normal immune responses in cancer patients. In this case, the patient's lymphocytes were not stimulated by the intact tumor cells to undergo blastogenesis. In the macrophage inhibition test, however, the patient's plasma appeared to enhance the release of MIF when her lymphocytes were stimulated by the tumor cells. This suggests that the patient could mount an immune response against her tumor. Serum or plasma factors may also have been important in its mediation. A specific tumor antibody against her pulmonary metastases is postulated.

On 14 May 1974 we began adriamycin therapy, 60 mg/M² every three weeks. There was dramatic clearing of her chest lesions within six weeks (Figure 3), and she remained free of pulmonary symptoms. However, she required intermittent transfusions for anemia related to the adriamycin therapy.

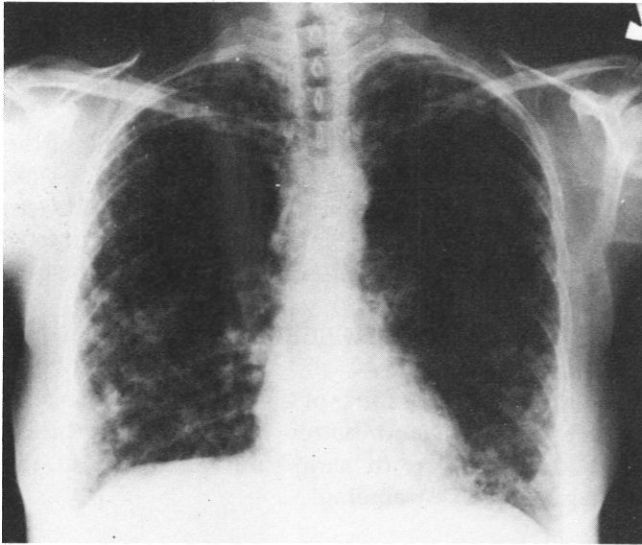


FIGURE 1. Postero-anterior radiograph of the chest shows widespread pulmonary nodules.

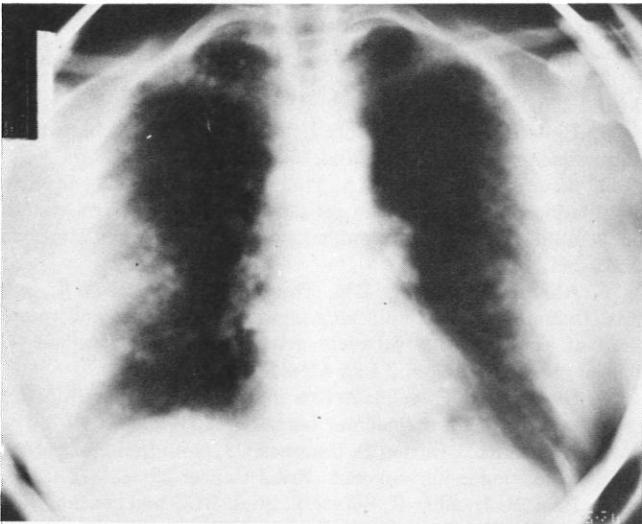


FIGURE 2. Laminograph of the chest reveals the pulmonary nodules to have lucent centers and cavitation.

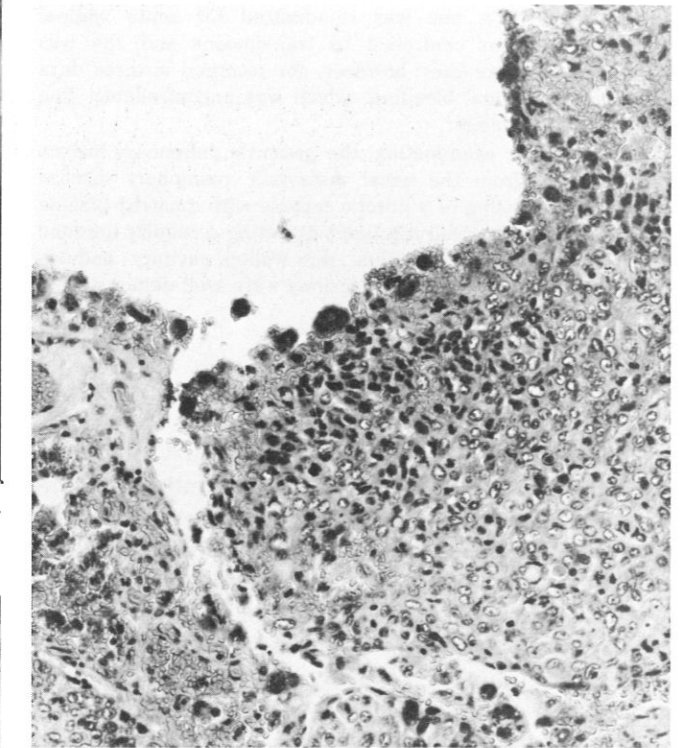
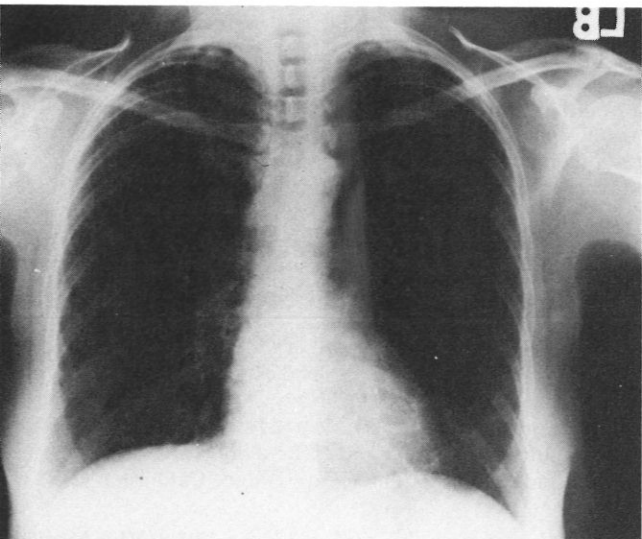


FIGURE 4. Plasma cell and mononuclear cellular reaction about the cavitary pulmonary nodules, indicating a cellular immune response.

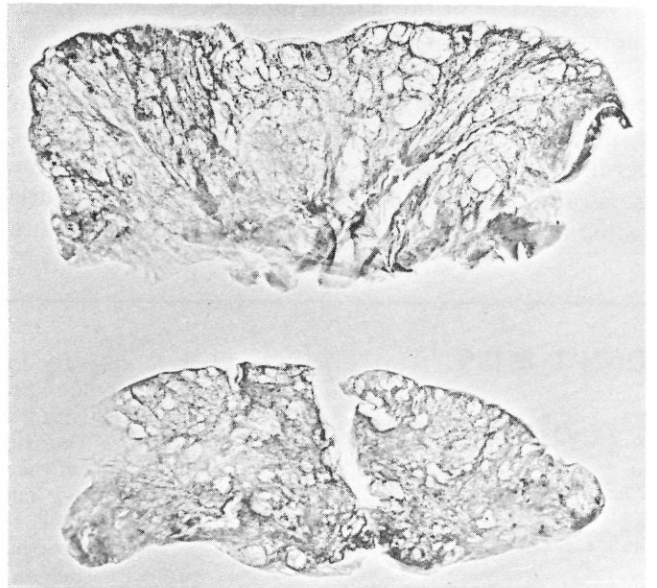


FIGURE 5. Xeroradiographs of the lungs show characteristic thin-walled cavitary nodules.

<FIGURE 3. Postero-anterior radiograph of the chest after six weeks of adriamycin therapy shows clearing of the pulmonary nodules.

On 2 July 1974, she was re-admitted for acute vaginal bleeding. This was controlled by transfusions and she was discharged two days later; however, she returned in three days with massive vaginal bleeding, which was uncontrollable. She died shortly thereafter.

On microscopic examination, the patient's pulmonary lesions were different from the usual metastatic pulmonary disease (Figure 4), consisting of a fibrotic capsule with a patchy plasma cell and mononuclear cell reaction suggesting a cellular immune response. Widespread multiple thin-walled cavitory nodules characteristic of the pulmonary lesions were well demonstrated by xerography (Figure 5).

COMMENT

These data are preliminary and must be interpreted cautiously. It is too early in our understanding of how the immune system functions in cancer patients to attempt to correlate *in vitro* tests with the events taking place in the patient. However, evidence strongly suggests that the immune system is extremely important in the host's defense against cancer. Preliminary clinical reports indicate that stimulation of the immune system with nonspecific materials such as BCG improves survival in certain patients (6,7,8). The value of immunotherapy is now being examined in many clinical protocols. A clearer understanding of how the immune system operates in cancer patients and how it can be manipulated for the advantage of the host should be forthcoming in the next decade.

Since immunotherapy should not be administered outside established clinical protocols, we treated our patient with chemotherapy. Response of metastatic cervical carcinoma to chemotherapeutic agents generally is poor. A new antitumor antibiotic called adriamycin has recently been introduced, and

preliminary clinical trials suggest that it may have some activity toward cervical carcinoma. Our patient's primary tumor did respond to therapy; the regression of her metastatic pulmonary disease was, at least in part, a response to the adriamycin therapy. Unfortunately, invasion of tumor into a major pelvic vessel resulted in a fatal hemorrhage.

CONCLUSION

A better understanding of the immune response in cancer patients, and better isolation of a tumor antibody may lead to significant advances in the management of carcinoma.

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DON'T MISS

Problem Drinking Among Navy Recruits

Many Navy recruits drink excessively before joining the Navy and, once enlisted, are encouraged by their peers to continue, say researchers at the Navy Personnel Research and Development Center.

Kathleen P. Durning and Erik Jansen questioned some 2,000 Navy recruits on

their drinking habits, attitudes, and alcohol-related problems. Results were compared with a survey on the drinking habits of enlisted naval personnel. Some 46% of the recruits (compared to 40% of Navy enlisted men) reported heavy alcohol intake; recruits also reported more binge drinking, potential problems such as psychological dependence on alcohol, alcohol-induced beligerence, and trouble with the law. Recruits and enlisted men reported similar problems with friends, health and finances that they attributed to excessive drinking. Less than one-third of the people studied were nondrinkers, or drinkers with no reported problems.

Navy alcohol prevention programs must go beyond prevention to reverse existing drinking habits and attitudes, the authors recommend. Further research is needed to determine how peer pressure influences the young enlisted man's drinking. The authors suggest developing better recreation facilities as alternatives to alcohol use, and eliminating alcohol discount pricing at Navy facilities.

Copies of their report, "Problem Drinking and Attitudes Toward Alcohol Among Navy Recruits" (NPRDC TR 76-21), are available from the Navy Personnel Research and Development Center, San Diego, California 92152.

A Tumor Registry Study of Cancer of the Oral Cavity and Associated Structures

LT Joseph J. Zambon, DC, USNR

Oral cancer comprises 1% to 2% of all cancers in the United States, and up to 50% of all cancers in some Asian countries (1). Approximately 16,000 Americans will develop oral cancers in a given year, and approximately two out of three of these people will die (2).

The present study was undertaken to review tumor registry records at Naval Regional Medical Center, Portsmouth, Virginia, for cancer of the oral cavity and associated sites. All records from the time the registry was established in 1957 up to April 1975 were examined for reports of cancers in the lip, tongue, salivary gland, gum, floor of mouth, buccal

mucosa, palate, oropharynx, nasopharynx, hypopharynx, and pharynx. If cancer was reported in one of those sites, the following information was obtained: age of patient at initial diagnosis, histologic type of cancer, extent of disease at initial diagnosis, sex and race of patient, date of initial diagnosis, follow-up status or death, cause of death, and survival time.

The extent of disease at initial diagnosis was divided into four categories: (1) localized—confined to primary site with no evidence of metastases and no extension to adjacent anatomical sites; (2) regional involvement—no evidence of distant metastases; moderate extension of malignancy to adjacent anatomical sites; (3) regional lymph metastases; and (4) distant or extensive spread and metastases.

There were 243 cases of cancer reported in the aforementioned sites. These were found in 183 men

LT Zambon is director of the U.S. Naval Regional Dental Center Branch, La Maddalena, Sardinia (FPO New York 09533). Research for this paper was done from 1974 to 1975 while he was a resident in general practice dentistry at NRMCMC Portsmouth, Va.

TABLE I. Cancers of the Oral Cavity and Associated Structures

SITE	NUMBER OF CASES	MEAN AGE OF PATIENT	SEX		RACE	
			MALE	FEMALE	CAUCASIAN	BLACK
Lip	54	45	52	2	54	0
Floor of mouth	28	53	23	5	26	2
Salivary gland	23	35	9	14	20	3
Tongue	17	52	11	6	15	2
Oropharynx	16	47	15	1	15	1
Nasopharynx	11	45	11	0	9	2
Hypopharynx	8	59	7	1	7	1
Palate	8	49	7	1	7	1
Gum	7	59	1	6	7	0
Pharynx	3	47	2	1	2	1
Buccal mucosa	2	43	1	1	1	1
Total	177	47	139	38	163	14

TABLE II. Extent of Malignancy at Initial Diagnosis, and Determinant Survival Rate

SITE	NUMBER OF CASES	LOCALIZED	EXTENT AT INITIAL DIAGNOSIS			DETERMINANT SURVIVAL RATE	AVERAGE SURVIVAL TIME
			REGIONAL INVOLVEMENT	REGIONAL METASTASES	DISTANT METASTASES		
Lip	54	53		1		96%	
Floor of mouth	28	16	10	2		64%	28 months
Salivary gland	23	17	4	2		83%	
Tongue	17	3	12	1	1	47%	22 months
Oropharynx	16	3	11	2		38%	28 months
Nasopharynx	11	4	6	1		38%	14 months
Hypopharynx	8	3	3	2		13%	15 months
Palate	8	5	3			63%	31 months
Gum	7	2	5			57%	27 months
Pharynx	3	1	2			33%	9 months
Buccal mucosa	2	2				100%	
Total	177	109	56	11	1	67%	

TABLE III. Histologic Diagnosis at Time of Initial Treatment

DIAGNOSIS	NUMBER OF CASES
Squamous cell carcinoma	142
Adenocarcinoma	9
Warthin's Tumor	5
Mucoepidermoid carcinoma	4
Transitional cell carcinoma	4
Adenocystic carcinoma	4
Malignant mixed tumor	2
Benign mixed tumor	2
Papillo cystic adenocarcinoma	2
Lymphoblastic lymphosarcoma	1
Malignant hemiangiopericytoma	1
Histiocytic lymphoma	1

TABLE IV. Cause of Death*

CAUSE OF DEATH	NUMBER OF DEATHS
Malignant neoplasm of nasopharynx	11
Malignant neoplasm of floor of mouth	10
Malignant neoplasm of tongue	10
Malignant neoplasm of oral mesopharynx	7
Malignant neoplasm of unspecified pharynx	6
Malignant neoplasm of salivary glands	5
Arteriosclerotic heart disease	4
Malignant neoplasm of hypopharynx	4
Malignant neoplasm of other and unspecified parts of mouth	2
Lymphosarcoma and reticulosarcoma	2
Malignant neoplasm of eye	1
Malignant neoplasm of other and unspecified sites	1
Lobar pneumonia	1
Malignant neoplasm of testis	1
Other diseases of liver	1
Homicide	1

*According to the International Statistical Classification of Diseases, Injuries, and Causes of Death

and 60 women, for a male/female ratio of 3:1. Sixty-six of these cases were benign mixed tumors of salivary glands, recorded in the tumor registry by special agreement. Excluding these, there were 177 cases, divided among 139 men and 38 women. This male/female ratio compares well with other studies of civilian populations. Chierici et al (3) found a 4:1 male/female ratio in his tumor registry study of oral cancer.

For each site, Table I shows the mean age of patients at initial diagnosis, and their sex and race. Cancers in these sites accounted for 5.5% of the cases recorded in the tumor registry.

When comparing these figures with the results of other studies, bear in mind the predominant male and youth bias of the military population. The mean age of 45 years reported here for cancer of the lip, for example, corresponds well with a mean age of 47 years reported in a study of cancer of the lip in a military population (4), but not with a mean age of 62 years reported in a study of the general population (5). These population biases may obscure the importance of other factors.

The effects of sun exposure, alcohol, tobacco, and other agents may also be responsible for the earlier appearance of pathology; or the availability of free medical and dental care may result in the earlier detection of these lesions.

In this study, the most common site for oral cancer was the lip; 52 of these 54 cancers were on the lower lip. The most common intraoral site was the floor of the mouth, worth noting since many studies list the tongue as the most common intraoral site (3,6,7,8).

Table II attempts to relate the extent of malignancy at initial diagnosis with the determinant survival rate, that is, the number of people who have survived their oral malignancy. The highest survival rates are associated with sites where the disease had least spread at the time of initial diagnosis. The lowest survival rates are related to greater spread at initial diagnosis, and to decreased accessibility of the site for visualization. The poorest survival rate was found for malignancies in the hypopharynx, which may be examined indirectly with mirror or directly with laryngoscope. Since these sites are relatively difficult to examine, lesions here usually remain undiscovered until they are advanced to the stage that the patient complains of some symptomatology.

Of 177 cases of oral cancer, 142 or 80% were squamous cell carcinoma. If we consider only mucosal sites and exclude the salivary tumors, this number increases to 92%, comparing favorably with other studies which report 85.8% (3), 90% (6),

89.9% (7), and 90% (8). Table III shows the histologic diagnosis at initial determination, in order of decreasing frequency.

The determinant survival rate for all sites was 67%. Excluding cancers of the lip, which are rarely fatal, the determinant survival rate for intraoral cancers was 54%. The absolute survival rate, which considered death from all causes, including oral malignancies, was 62%. Table IV shows all causes of death, in order of decreasing frequency. The most frequent cause of death was malignancies of the nasopharynx, which claimed 11 patients.

SUMMARY

In the 17 years since the tumor registry was established at Naval Regional Medical Center, Portsmouth, Virginia, 177 cases of cancer in the oral cavity and associated sites have been reported. The most common oral site was the lower lip; the most common intraoral site was the floor of the mouth. These oral cancers represent 5.5% of all cancer cases in the tumor registry. Of 177 oral cancers, 80% were squamous cell carcinomas. The absolute survival rate was 62%, and the determinant survival rate was 67%.

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